

125

~~125~~ KENNEWICK SILT LOAM, 5 TO 10 PERCENT SLOPES. \$T1 THIS VERY DEEP, WELL DRAINED SOIL IS ON TERRACES. IT FORMED IN LACUSTRINE DEPOSITS. THE NATIVE VEGETATION IS MAINLY GRASSES AND SHRUBS. ELEVATION IS ~~550~~<sup>500</sup> TO ~~1400~~<sup>1000</sup> FEET. THE AVERAGE ANNUAL PRECIPITATION IS ABOUT 7 INCHES, THE AVERAGE ANNUAL TEMPERATURE IS ABOUT ~~55~~<sup>51</sup> DEGREES F, AND THE AVERAGE FROST-FREE SEASON IS ABOUT ~~175~~<sup>190</sup> DAYS.

\$101 TYPICALLY, THE SURFACE LAYER IS <sup>LIGHT GRAY</sup> ~~VERY PALE BROWN~~ SILT LOAM ~~88~~ INCHES THICK. THE SUBSTRATUM TO A DEPTH OF 60 INCHES OR MORE IS <sup>LIGHT GREY</sup> ~~VERY PALE BROWN~~ SILT LOAM AND <sup>VERY FINE SANDY LOAM.</sup> ~~FINE STRATA OF SILT~~. THE SOIL IS CALCAREOUS THROUGHOUT.

\$101 PERMEABILITY OF THIS KENNEWICK SOIL IS MODERATELY SLOW. AVAILABLE WATER CAPACITY IS HIGH. EFFECTIVE ROOTING DEPTH IS 60 INCHES OR MORE. RUNOFF IS MEDIUM, AND THE HAZARD OF WATER EROSION IS MODERATE. THE HAZARD OF SOIL BLOWING IS MODERATE.

\$101 INCLUDED IN THIS UNIT IS ABOUT 20 PERCENT KENNEWICK FINE SANDY LOAM, ~~HAHLUKE VERY FINE SANDY LOAM~~, WARDEN SILT LOAM, SAGEMOOR SILT LOAM, ~~SOILS THAT HAVE A HARDPAN AT A DEPTH OF 20 TO 60 INCHES,~~ <sup>AND</sup> KENNEWICK SOILS THAT HAVE SLOPES OF MORE THAN 10 PERCENT. ~~AND SOILS ADJACENT TO ROYAL CITY THAT DO NOT HAVE A STRATIFIED SUBSTRATUM AND ARE MODERATELY PERMEABLE.~~

\$101 THIS UNIT IS USED FOR IRRIGATED CULTIVATED CROPS, HAY, AND PASTURE AND AS HOMESITES AND RANGELAND.

\$101 IF THIS UNIT IS USED FOR IRRIGATED CROPS, THE MAIN LIMITATIONS ARE THE HAZARDS OF WATER EROSION AND SOIL BLOWING AND STEEPNESS OF SLOPE. MANY KINDS OF CROPS, SUCH AS SMALL GRAIN, SUGAR BEETS, POTATOES, BEANS, CORN, ALFALFA, GRASSES, AND PEAS, CAN BE GROWN UNDER IRRIGATION.

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\$101 SPRINKLER, DRIP, OR TRICKLE IRRIGATION IS BEST SUITED TO THIS UNIT BECAUSE OF THE STEEPNESS OF SLOPE. SPRINKLER IRRIGATION SYSTEMS SHOULD BE MANAGED TO AVOID EXCESSIVE WATER APPLICATION RATES, WHICH CAUSE PUDDLING, IMPAIR AERATION, AND REDUCE THE WATER INTAKE RATE. WHEN GROWING ROW CROPS, PITTING OR FORMING SMALL BASINS BETWEEN THE ROWS REDUCES RUNOFF AND WATER EROSION. RETURNING CROP RESIDUE TO THE SOIL AND CHISELING, WHEN NEEDED, INCREASE THE WATER INTAKE RATE. MINIMUM TILLAGE HELPS TO MAINTAIN THE TILTH OF THE SURFACE LAYER, INCREASES THE WATER INTAKE RATE, AND REDUCES WATER EROSION.

\$101 USING A CROPPING SYSTEM THAT INCLUDES CLOSE-GROWING, HIGH-RESIDUE CROPS IN THE ROTATION AND MAINTAINING CROP RESIDUE ON THE SURFACE REDUCE EROSION. WINTER COVER CROPS PROTECT THE SOIL FROM EROSION. IF MAINTAINED ON THE SURFACE, RESIDUE FROM THESE CROPS REDUCES SOIL BLOWING IN SPRING. SOIL BLOWING IS ALSO REDUCED BY PRACTICING MINIMUM TILLAGE, WHICH REDUCES PULVERIZATION OF THE SOIL. LAND SMOOTHING OPERATIONS THAT INCLUDE DEEP CUTS CAN EXPOSE THE CALCAREOUS SUBSTRATUM.

\$101 THE POTENTIAL PLANT COMMUNITY ON THIS UNIT IS MAINLY WINTERFAT, SANDBERG BLUEGRASS, AND SPINY HOPSAGE. IF THE RANGE IS OVERGRAZED, THE PROPORTION OF PREFERRED FORAGE PLANTS SUCH AS WINTERFAT<sup>AND</sup> SANDBERG BLUEGRASS, ~~AND BLUEBUNCH WHEATGRASS~~ DECREASES AND THE PROPORTION OF LESS PREFERRED FORAGE PLANTS SUCH AS SPINY HOPSAGE<sup>AND</sup> CHEATGRASS, ~~AND BIG SAGEBRUSH~~ INCREASES. AREAS THAT ARE HEAVILY INFESTED WITH UNDESIRABLE SHRUBS CAN BE IMPROVED BY SUCH METHODS AS RAILING, CHAINING, BEATING, AND CHEMICAL TREATMENT.

\$101 THIS UNIT IS SUITED TO RANGELAND SEEDING. THE MAIN LIMITATIONS FOR SEEDING ARE THE LOW ANNUAL PRECIPITATION

AND THE HAZARD OF SOIL BLOWING. PROPER TIMING OF SEEDING IS CRITICAL TO THE ESTABLISHMENT OF SEEDLINGS. THE UNIT CAN BE SEEDED TO ADAPTED GRASSES.

\$101 THIS UNIT IS WELL SUITED TO HOMESITE DEVELOPMENT. DUSTINESS CAN BE A PROBLEM ON LARGE CONSTRUCTION SITES; THEREFORE, THESE SITES SHOULD BE DISTURBED AS LITTLE AS POSSIBLE. MULCHING, FERTILIZATION, AND IRRIGATION ARE NEEDED TO ESTABLISH LAWN GRASSES AND OTHER SMALL PLANTS.

\$101 THE MAIN LIMITATION FOR SEPTIC TANK BACKFILL FOR THE TRENCH AND LONG ABSORPTION LINES HELPS TO COMPENSATE FOR THIS LIMITATION.

\$101 THIS MAP UNIT IS IN CAPABILITY SUBCLASSES IIIe, IRRIGATED, AND VIe, NONIRRIGATED.

48  
QUINCY LOAM FINE SAND, 0 TO 15 PERCENT SLOPES. \$11 THIS  
VERY DEEP, SOMEWHAT EXCESSIVELY DRAINED SOIL IS ON TERRACES AND  
DUNES. IT FORMED IN SAND DERIVED FROM MIXED SOURCES. THE NATIVE  
VEGETATION IS MAINLY GRASSES AND SHRUBS. ELEVATION IS ~~350~~<sup>1000</sup> TO  
~~2,200~~ FEET. THE AVERAGE ANNUAL PRECIPITATION IS ABOUT 7 INCHES,  
THE AVERAGE ANNUAL TEMPERATURE IS ABOUT 52 DEGREES F, AND THE  
AVERAGE FROST-FREE SEASON IS ABOUT ~~145~~<sup>190</sup> DAYS.

TYPICALLY, THE SURFACE LAYER IS GRAYISH BROWN LOAMY FINE SAND 4 INCHES  
THICK. THE UPPER PART OF THE UNDERLYING MATERIAL IS LIGHT BROWNISH GRAY LOAMY  
FINE SAND 46 INCHES THICK. THE LOWER PART TO A DEPTH OF 60 INCHES OR MORE IS  
LIGHT BROWNISH GRAY FINE SAND.

\$101 PERMEABILITY OF THIS QUINCY SOIL IS RAPID. AVAILABLE WATER  
CAPACITY IS LOW. EFFECTIVE ROOTING DEPTH IS 60 INCHES OR MORE.  
RUNOFF IS SLOW, AND THE HAZARD OF WATER EROSION IS SLIGHT. THE  
HAZARD OF SOIL BLOWING IS <sup>severe</sup> HIGH.

\$101 INCLUDED IN THIS UNIT IS ABOUT 25 PERCENT HEZEL LOAMY FINE  
SAND, ROYAL LOAMY FINE SAND, TIMMERMAN LOAMY SAND, QUINCY FINE  
SAND, BURBANK LOAMY FINE SAND, AND QUINCY SOILS THAT HAVE SLOPES  
OF MORE THAN 15 PERCENT.

\$101 THIS UNIT IS USED FOR IRRIGATED CROPS, RANGELAND, IRRIGATED  
HAY AND PASTURE, AND HOMESITES.

\$101 IF THIS UNIT IS USED FOR IRRIGATED CROPS, THE MAIN LIMITATIONS  
ARE STEEPNESS OF SLOPE, THE LOW AVAILABLE WATER CAPACITY, AND THE  
HAZARD OF SOIL BLOWING. THE MAIN IRRIGATED CROPS ARE POTATOES,  
CORN, SMALL GRAIN, ALFALFA, AND GRASSES.

\$101 SPRINKLER, DRIP, OR TRICKLE IRRIGATION IS SUITED TO THIS UNIT.  
BECAUSE OF THE LOW AVAILABLE WATER CAPACITY, MOST CROPS NEED  
FREQUENT, LIGHT APPLICATIONS OF WATER. LAND SMOOTHING OPERATIONS

THAT INCLUDE DEEP PLOTS ARE FEASIBLE ON THIS UNIT.

\$101 USING A CROPPING SYSTEM THAT INCLUDES CLOSE-GROWING, HIGH-RESIDUE CROPS IN THE ROTATION AND MAINTAINING CROP RESIDUE ON THE SURFACE REDUCE EROSION. WINTER COVER CROPS ALSO PROTECT THE SOIL FROM EROSION. IF MAINTAINED ON THE SURFACE, RESIDUE FROM THESE CROPS REDUCES SOIL BLOWING IN SPRING. SOIL BLOWING IS ALSO REDUCED BY PRACTICING MINIMUM TILLAGE, WHICH REDUCES PULVERIZATION OF THE SOIL.

\$101 THE POTENTIAL PLANT COMMUNITY ON THIS UNIT IS MAINLY NEEDLEANDTHREAD, INDIAN RICEGRASS, SANDBERG BLUEGRASS, ~~BLUEBUNCH WHEATGRASS~~ AND BIG SAGEBRUSH. THE PRODUCTION OF FORAGE IS LIMITED BY THE LOW AVAILABLE WATER CAPACITY. IF THE RANGE IS OVERGRAZED, THE PROPORTION OF PREFERRED FORAGE PLANTS SUCH AS NEEDLEANDTHREAD DECREASES AND THE PROPORTION OF LESS PREFERRED FORAGE PLANTS SUCH AS RABBITBRUSH AND CHEATGRASS INCREASES. AREAS THAT ARE HEAVILY INFESTED WITH UNDESIRABLE SHRUBS CAN BE IMPROVED BY SUCH METHODS AS RAILING, CHAINING, BEATING, AND CHEMICAL TREATMENT. SEEDING ON THIS UNIT GENERALLY IS NOT PRACTICAL BECAUSE OF THE HAZARD OF SOIL BLOWING, THE LOW ANNUAL PRECIPITATION, AND THE LOW AVAILABLE WATER CAPACITY.

\$101 THIS UNIT IS WELL SUITED TO HOMESITE DEVELOPMENT. SOIL BLOWING CAN BE A PROBLEM ON CONSTRUCTION SITES. CUTBANKS ARE NOT STABLE AND ARE SUBJECT TO CAVING IN. MULCHING, FERTILIZATION, AND IRRIGATION ARE NEEDED TO ESTABLISH LAWN GRASSES AND OTHER SMALL PLANTS.

\$101 THE MAIN LIMITATION FOR SEPTIC TANK ABSORPTION FIELDS IS THE RISK OF SEEPAGE. IF THE DENSITY OF HOUSING IS MODERATE TO HIGH, COMMUNITY SEWAGE SYSTEMS ARE NEEDED TO PREVENT CONTAMINATION OF

NEARBY WATER SUPPLIES.

\$101 THIS MAP UNIT IS IN CAPABILITY SUBCLASSES IVE, IRRIGATED, AND  
VIIe, NONIRRIGATED.

68  
~~112122~~ SAGEHILL VERY FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES.  
\$11 THIS VERY DEEP, WELL DRAINED SOIL IS ON TERRACES. IT FORMED  
IN LACUSTRINE DEPOSITS THAT HAVE A MANTLE OF LOESS. THE NATIVE  
VEGETATION IS MAINLY GRASSES AND SHRUBS. ELEVATION IS <sup>500</sup>~~500~~ TO  
<sup>1000</sup>~~1750~~ FEET. THE AVERAGE ANNUAL PRECIPITATION IS ABOUT 7 INCHES,  
THE AVERAGE ANNUAL TEMPERATURE IS ABOUT <sup>51</sup>~~50~~ DEGREES F, AND THE  
AVERAGE FROST-FREE SEASON IS ABOUT <sup>185</sup>~~160~~ DAYS.

\$101 TYPICALLY, THE SURFACE LAYER IS BROWN VERY FINE SANDY LOAM ~~26~~  
INCHES THICK. THE SUBSOIL IS BROWN VERY FINE SANDY LOAM ~~21~~ 19  
INCHES THICK. THE SUBSTRATUM TO A DEPTH OF 60 INCHES OR MORE IS  
PALE BROWN AND LIGHT ~~BROWNISH~~ GRAY <sup>SILT LOAM AND VERY FINE SANDY</sup>  
~~LOAM.~~ ~~BROWNISH GRAY SILT LOAM,~~ THE SOIL IS CALCAREOUS IN THE  
SUBSTRATUM.

\$101 PERMEABILITY OF THIS SAGEHILL SOIL IS MODERATE. AVAILABLE  
WATER CAPACITY IS HIGH. EFFECTIVE ROOTING DEPTH IS 60 INCHES OR  
MORE. RUNOFF IS SLOW, AND THE HAZARD OF WATER EROSION IS SLIGHT.  
THE HAZARD OF SOIL BLOWING IS MODERATE.

\$101 INCLUDED IN THIS UNIT IS ABOUT 20 PERCENT HARDEN <sup>SILT</sup>~~SILT LOAM~~,  
ROYAL VERY FINE SANDY LOAM, KENNEWICK <sup>SILT LOAM</sup>~~FINE SANDY LOAM~~, QUINCY  
LOAMY FINE SAND, HEZEL LOAMY FINE SAND, AND SAGEHILL SOILS THAT  
HAVE SLOPES OF MORE THAN 2 PERCENT.

\$101 THIS UNIT IS USED FOR IRRIGATED CULTIVATED CROPS, HAY, AND  
PASTURE.

\$101 IF THIS UNIT IS USED FOR IRRIGATED CROPS, THE MAIN LIMITATION  
IS THE HAZARD OF SOIL BLOWING. MANY KINDS OF CROPS, SUCH AS  
SMALL GRAIN, SUGAR BEETS, POTATOES, BEANS, CORN, ALFALFA,  
GRASSES, AND PEAS, CAN BE GROWN UNDER IRRIGATION.

\$101 FURROW, CORRUGATION, TRICKLE, DRIP, OR SPRINKLER IRRIGATION SYSTEMS ARE SUITED TO THIS UNIT. SPRINKLER IRRIGATION SYSTEMS SHOULD BE MANAGED TO AVOID EXCESSIVE WATER APPLICATION RATES, WHICH CAUSE PUDDLING, IMPAIR AERATION, AND REDUCE THE WATER INTAKE RATE. RETURNING CROP RESIDUE TO THE SOIL AND CHISELING, WHEN NEEDED, INCREASE THE WATER INTAKE RATE. MINIMUM TILLAGE, WHICH HELPS TO MAINTAIN THE TILTH OF THE SURFACE LAYER INCREASES THE WATER INTAKE RATE.

\$101 USING A CROPPING SYSTEM THAT INCLUDES CLOSE-GROWING, HIGH-RESIDUE CROPS IN THE ROTATION AND MAINTAINING CROP RESIDUE ON THE SURFACE REDUCE SOIL BLOWING. WINTER COVER CROPS ALSO PROTECT THE SOIL FROM EROSION. IF MAINTAINED ON THE SURFACE, RESIDUE FROM THESE CROPS REDUCES SOIL BLOWING IN SPRING. SOIL BLOWING IS ALSO REDUCED BY PRACTICING MINIMUM TILLAGE, WHICH REDUCES PULVERIZATION OF THE SOIL. LAND SMOOTHING OPERATIONS THAT INCLUDE DEEP CUTS CAN EXPOSE THE CALCAREOUS SUBSTRATUM.

\$101 THIS MAP UNIT IS IN CAPABILITY SUBCLASS IIe, IRRIGATED.



~~SAGEHILL~~ SAGEHILL ~~VERY~~ FINE SANDY LOAM, 2 TO 5 PERCENT SLOPES.

\$11 THIS VERY DEEP, WELL DRAINED SOIL IS ON TERRACES. IT FORMED IN LACUSTRINE DEPOSITS THAT HAVE A MANTLE OF LOESS. THE NATIVE VEGETATION IS MAINLY GRASSES AND SHRUBS. ELEVATION IS ~~500~~<sup>500</sup> TO ~~1000~~<sup>1000</sup> FEET. THE AVERAGE ANNUAL PRECIPITATION IS ABOUT 7 INCHES. THE AVERAGE ANNUAL TEMPERATURE IS ABOUT ~~50~~<sup>51</sup> DEGREES F, AND THE AVERAGE FROST-FREE SEASON IS ABOUT ~~180~~<sup>185</sup> DAYS.

\$101 TYPICALLY, THE SURFACE LAYER IS BROWN VERY FINE SANDY LOAM ~~16~~<sup>9</sup> INCHES THICK. THE SUBSOIL IS BROWN VERY FINE SANDY LOAM ~~12~~<sup>9</sup> INCHES THICK. THE SUBSTRATUM TO A DEPTH OF 60 INCHES OR MORE IS PALE BROWN AND LIGHT ~~BROWNISH~~ GRAY <sup>SILT LOAM AND</sup> VERY FINE SANDY LOAM, ~~AND LIGHT BROWNISH GRAY SILT LOAM.~~ THE SOIL IS CALCAREOUS IN THE SUBSTRATUM.

\$101 PERMEABILITY OF THIS SAGEHILL SOIL IS MODERATE. AVAILABLE WATER CAPACITY IS HIGH. EFFECTIVE ROOTING DEPTH IS 60 INCHES OR MORE. RUNOFF IS MEDIUM, AND THE HAZARD OF WATER EROSION IS MODERATE. THE HAZARD OF SOIL BLOWING IS MODERATE.

\$101 INCLUDED IN THIS UNIT IS ABOUT 20 PERCENT HARDEN ~~SILT LOAM~~<sup>SOILS</sup>, ROYAL VERY FINE SANDY LOAM, KENNEWICK ~~VERY FINE SANDY LOAM~~<sup>SILT LOAM</sup>, QUINCY LOAMY FINE SAND, HEZEL LOAMY FINE SAND, AND SAGEHILL SOILS THAT HAVE SLOPES OF MORE THAN 5 PERCENT.

\$101 THIS UNIT IS USED FOR IRRIGATED CULTIVATED CROPS, HAY, AND PASTURE.

\$101 IF THIS UNIT IS USED FOR IRRIGATED CROPS, THE MAIN LIMITATION IS THE HAZARD OF SOIL BLOWING. MANY KINDS OF CROPS, SUCH AS SMALL GRAIN, SUGAR BEETS, POTATOES, BEANS, CORN, ALFALFA, GRASSES, AND PEAS, CAN BE GROWN UNDER IRRIGATION.

\$101 FURROW, CORRUGATION, TRICKLE, DRIP, OR SPRINKLER IRRIGATION SYSTEMS ARE SUITED TO THIS UNIT. CORRUGATION IRRIGATION IS SUITED TO CLOSE-GROWING CROPS. IF FURROW OR CORRUGATION IRRIGATION IS USED, TILLING THE SOIL BEFORE APPLYING IRRIGATION WATER CAN INCREASE THE WATER INTAKE RATE; HOWEVER, IT ALSO CAN INCREASE THE RISK OF EROSION. EROSION CAN BE MINIMIZED BY REDUCING THE SIZE OF THE IRRIGATION STREAM. SPRINKLER IRRIGATION SYSTEMS SHOULD BE MANAGED TO AVOID EXCESSIVE WATER APPLICATION RATES, WHICH CAUSE PUDDLING, IMPAIR AERATION, AND REDUCE THE WATER INTAKE RATE. RETURNING CROP RESIDUE TO THE SOIL AND CHISELING, WHEN NEEDED, INCREASE THE WATER INTAKE RATE.

\$101 USING A CROPPING SYSTEM THAT INCLUDES CLOSE-GROWING, HIGH-RESIDUE CROPS IN THE ROTATION AND MAINTAINING CROP RESIDUE ON THE SURFACE REDUCE EROSION. WINTER COVER CROPS ALSO PROTECT THE SOIL FROM EROSION. IF MAINTAINED ON THE SURFACE, RESIDUE FROM THESE CROPS REDUCES SOIL BLOWING IN SPRING. SOIL BLOWING IS ALSO REDUCED BY PRACTICING MINIMUM TILLAGE, WHICH REDUCES PULVERIZATION OF THE SOIL. LAND SMOOTHING OPERATIONS THAT INCLUDE DEEP CUTS CAN EXPOSE THE CALCAREOUS SUBSTRATUM.

\$101 THIS MAP UNIT IS IN CAPABILITY SUBCLASS IIe, IRRIGATED.